

In the claims:

Following is a complete set of claims as amended with this Response.

1. (Previously Presented) A method comprising:  
receiving an incoming call at a port of an automated attendant from a telephone switch;  
receiving a call handle associated with the incoming call at the automated attendant from the telephone switch, the call handle being generated by the switch independent of the caller's identity and any data received from the caller;  
applying the call handle to retrieve caller information associated with the call handle; and  
using the retrieved caller information at the automated attendant to handle the call if caller information associated with the call handle is found.
2. (Previously Presented) The method of claim 1, wherein receiving a call handle comprises receiving a tone sequence at a port of the automated attendant, decoding the tone sequence, and deriving the call handle from the decoded tone sequence.
3. (Previously Presented) The method of claim 2, wherein the tone sequence is a DTMF tone sequence transmitted to the port over the same transmission line as the incoming call.
4. (Original) The method of claim 1, wherein receiving a call handle comprises receiving a call handle message through a digital interface.

5. (Previously Presented) The method of claim 4, wherein the digital interface comprises a digital backplane connection to a switch from which the incoming call was received.

6. (Previously Presented) The method of claim 1, further comprising requesting data from the caller and storing received data in association with the call handle.

7. (Original) The method of claim 1, wherein using the retrieved caller information comprises providing audio information in a language previously selected by the caller.

8. (Original) The method of claim 1, if no caller information associated with the call handle is found, further comprising:

requesting caller information from the caller;

storing received caller information in association with the call handle; and

using the received caller information to handle the call.

9. (Original) The method of claim 1, further comprising receiving an indication of whether the call is a forwarded call and wherein retrieving caller information and using the retrieved information are performed only if the call is a forwarded call.

10. (Original) The method of claim 9, if the call is not a forwarded call, further comprising:

requesting caller information from the caller;

storing received caller information in association with the call handle; and

using the received caller information to handle the call.

11. (Previously Presented) A machine-readable medium having stored thereon data representing instructions which, when executed by a machine, cause the machine to perform operations comprising:

receiving an incoming call at a port of an automated attendant from a telephone switch;

receiving a call handle associated with the incoming call at the automated attendant from the telephone switch, the call handle being generated by the switch independent of the caller's identity and any data received from the caller;

applying the call handle to retrieve caller information associated with the call handle; and

using the retrieved caller information to handle the call at the automated attendant if caller information associated with the call handle is found.

12. (Original) The medium of claim 11, wherein if no caller information associated with the call handle is found, the instructions, when executed by the machine, cause the machine to perform further operations comprising:

requesting caller information from the caller;

storing received caller information in association with the call handle; and

using the received caller information to handle the call.

13. (Currently Amended) The medium ~~method~~ of claim 11, wherein if the call is not a forwarded call, the instructions, when executed by the machine, cause the machine to perform further operations comprising:

requesting caller information from the caller;

storing received caller information in association with the call handle; and

using the received caller information to handle the call.

14. (Previously Presented) An apparatus comprising:

an automated attendant port to receive an incoming call from a telephone switch;

an automated attendant port to receive a call handle associated with the incoming call from the telephone switch, the call handle being generated by the switch independent of the caller's identity and any data received from the caller;

a memory containing caller information associated with call handles; and

a processor to apply the call handle to retrieve caller information and use the retrieved caller information to handle the call if caller information associated with the call handle is found.

15. (Original) The apparatus of claim 14, wherein the automated attendant port to receive the call handle comprises a digital interface.

16. (Original) The apparatus of claim 15, wherein the digital interface comprises a digital backplane connection to a switch from which the incoming call was received.

17. (Previously Presented) A method comprising:

receiving an incoming call at a telephone switch;

generating a call handle independent of the caller's identity and any data received from the caller as a set of in-band signaling tones for the incoming call at the telephone switch;

routing the incoming call to a port of a call handling system;

sending the call handle to the call handling system as in-band signaling tones in association with the routed call;

receiving a transfer of the routed call at the telephone switch from the call handling system;

re-routing the incoming call from the telephone switch back to a port of the call handling system; and

sending the call handle as in-band signaling tones from the telephone switch to the call handling system in association with the re-routed call.

18. (Previously Presented) The method of claim 17, wherein sending the call handle comprises deriving a tone sequence for the identification, coding the tone sequence into tones and sending the tone sequence to the call handling system port.

19. (Previously Presented) The method of claim 18, wherein the tone sequence is a DTMF tone sequence transmitted to the call handling system port over the same transmission line as the incoming call.

20. (Original) The method of claim 17, wherein sending the call handle comprises sending an identification message through a digital interface.

21. (Previously Presented) The method of claim 20, wherein the digital interface comprises a digital backplane connection to the call handling system.

22. (Previously Presented) A machine-readable medium having stored thereon data representing instructions which, when executed by a machine, cause the machine to perform operations comprising:

receiving an incoming call at a telephone switch;

generating a call handle independent of the caller's identity and any data received from the caller as a set of in-band signaling tones for the incoming call at the telephone switch;

routing the incoming call to a port of a call handling system;  
sending the call handle to the call handling system as in-band signaling tones in association with the routed call;  
receiving a transfer of the routed call at the telephone switch from the call handling system;  
re-routing the incoming call from the telephone switch back to a port of the call handling system; and  
sending the call handle as in-band signaling tones from the telephone switch to the call handling system in association with the re-routed call.

23. (Original) The medium of claim 22, wherein the instructions for sending the call handle comprise instructions which, when executed by the machine, cause the machine to perform further operations comprising sending an identification message through a digital interface.

24. (Original) The medium of claim 23, wherein the digital interface comprises a digital backplane connection to the call handling system.

25. (Previously Presented) An apparatus comprising:  
a port to receive an incoming call;  
a call handle generator to generate a call handle for the incoming call independent of the caller's identity and any data received from the caller as a set of in-band signaling tones;  
a switching network to route the incoming call from the receiving port to a port of a call handling system; and

an interface to send the generated call handle as in-band signaling tones to the port of the call handling system in association with the routed call.

26. (Original) The apparatus of claim 25, wherein the interface comprises a digital interface.

27. (Original) The apparatus of claim 26, wherein the digital interface comprises a digital backplane connection to the call handling system.

28. (Previously Presented) The method of claim 1, further comprising releasing the call to the switch and, after a sufficient time, deleting caller information associated with the call handle.

29. (Previously Presented) The medium of claim 11, wherein the instructions further comprise instructions which, when executed by the machine, cause the machine to perform further operations comprising releasing the call to the switch and, after a sufficient time, deleting caller information associated with the call handle.

30. (Previously Presented) The method of claim 17, further comprising releasing the call and, after a sufficient time, reusing the call handle for another call.

31. (Previously Presented) The medium of claim 22, further comprising releasing the call and, after a sufficient time, reusing the call handle for another call.

32-33. (Canceled)

34. (Currently Amended) The apparatus of Claim 25, wherein ~~An integrated telephone switch and call handling system~~ comprising:

the incoming call port comprises a PSTN interface in a card to receive incoming calls;

the call handle generator comprises a call handle generator card to generate a call handle to identify the incoming call; the apparatus further comprising:

a call handling system card;

a call switching network to route the incoming call to one of a port of the call handling system card and a telephone port to a subscriber telephone; and

a digital backplane connected to each of the cards to send the generated call handle to the call handling system in association with the routed call.

35. (Previously Presented) The apparatus of claim 32, further comprising:

a memory on the call handling system card containing caller information associated with call handles; and

a processor on the call handling system card to apply the call handle to retrieve caller information and use the retrieved caller information to handle the call if caller information associated with the call handle is found.